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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,917	07/21/2003	Kent Lindow		5368

7590

11/25/2005

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EXAMINER

DRODGE, JOSEPH W

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 11/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/623,917	<b>Applicant(s)</b> LINDOW, KENT	
	<b>Examiner</b> Joseph W. Drodge	<b>Art Unit</b> 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Coale patent 5,534,138, of record.

Coale discloses a fuel purifier comprising a hollow and cylindrically shaped body 2 having a top cap and a bottom cap, the top cap and bottom cap attached to the body, the top cap having an apex, and bottom cap having a bottom and discloses first internally threaded boss or priming inlet 40, 2<sup>nd</sup> internally threaded boss or collecting sump exit 50, 3<sup>rd</sup> boss or fuel inlet 20, 4<sup>th</sup> boss or fuel outlet 30, 5<sup>th</sup> boss or heating connector means 60, the priming inlet being at the apex of top cap, collecting sump exit located at bottom of bottom cap, the fuel inlet and outlet and heating connector means located on exterior surface of the body, the priming inlet having an air bleed means threadedly attached thereto, bifurcating plate 150/160, the plate attached to interior surface of the body, fuel inlet 20 communicating with a fuel transmission conduit (figure 5) that has inlet and outlet, the fuel transmission inlet communicating with the fuel inlet and fuel transmission outlet angularly directing fuel against the plate causing contaminant separation, the plate having a 1<sup>st</sup> and 2<sup>nd</sup> chamber in the proximity of the fuel inlet and exit, respectively.

Also disclosed are a 1<sup>st</sup> separating means 130 positionally fixed towards a bottom of the body and located in the 2<sup>nd</sup> chamber, 2<sup>nd</sup> separating means 140 fixed

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towards bottom of the body and located in the 1<sup>st</sup> chamber, 1<sup>st</sup> separator plate 110 attached to the interior surface of the body and also located in the 1<sup>st</sup> chamber, the 1<sup>st</sup> separator plate creating an upper and lower inlet portion and having holes 80 that allow communication between upper and lower inlet portion, and finally, an angled collecting plate 170 in the 2<sup>nd</sup> chamber and attached to the surface of the body and bifurcating plate, the collecting plate having an upper edge positioned towards upper portion of bifurcating plate and directing fuel towards outlet of the body.

As to claims 3 and 4, the priming means and drainage valve means are both stop cocks as shown in Figure 5.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coale patent 5,534,138 in view of Yeh patent 5,866,000.

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Claims 2 and 5 differ from Coale in requiring the 1<sup>st</sup> and 2<sup>nd</sup> separating means each being a perforated plate and there being means for contaminants to settle towards bottom of a bottom cap and to be removed through a collecting sump exit. Yeh teaches such perforated plate separating means 18 and 30 as shown in Figure 4, with contaminants settling towards bottom of bottom cap 32 and removed through sump exit 36. It would have been obvious to one of ordinary skill in the art to have incorporated the perforated plate separating means and contaminant removal features of Yeh into the Coale apparatus, in order to provide fuel more thoroughly free of contaminants, without allowing a buildup of possibly clogging contaminants in the fuel purifier.

As to claim 5, it would have been obvious to have fabricated the perforations or holes of the perforated plate separating means to be of any ratio optimizing flow-through of the fuel being purified and removal of contaminants of a size exceeding a given size; no particular significance is seen to correspond to the claimed ratio of 4 to 7.5 %. Attention is drawn to Yeh at column 8, lines 14-18 and lines 46-57 teaching that dimensions of various components may be varied over a wide range and determined experimentally to optimize separation efficiency.

Applicant's arguments filed on October 3, 2005 have been fully considered but they are not persuasive. It is argued that the various components of Coale and Yeh have a plurality of different functions and purposes from what is intended in the instant application and claims. It is submitted that in apparatus claims, intended use, purpose

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and function of apparatus components is of little patentable weight, so long as the references anticipate structure equivalent to what is claimed.

With respect to claim 5, it is argued that the claimed ratio of pore size dimensions to plate dimensions is not taught by the references. It is submitted that Yeh suggests varying of design of components in the separators relative to flow characteristics of the mixture being separated and experimentally determining ratios and dimensions (Yeh at column 8, lines 14-18 and 46-55).

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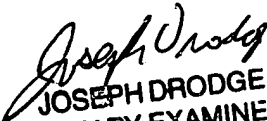
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at 571-272-1151. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

November 22, 2005

  
JOSEPH DRODGE  
PRIMARY EXAMINER